UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MA 02109-3912

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Date in Electronic Signature

CONCURRENCE Brona Simon
2/22/21
BRONA SIMON
STATE HISTORIC
PRESERVATION OFFICER
MASSACHUSETTS
HISTORICAL COMMISSION

Ms. Brona Simon
State Historic Preservation Officer and Executive Director
Massachusetts Historical Commission
220 Morrissey Boulevard
Boston, MA 02125

Mr. David Weeden
Interim Tribal Historic Preservation Officer
Mashpee Wampanoag Tribe
483 Great Neck Road South
Mashpee, MA 02649
david.weeden@mwtribe-nsn.gov

Re: Initiation of Section 106 Consultation
Olin Chemical Superfund Site
Wilmington, Massachusetts

To Whom It May Concern:

By this letter, EPA is initiating consultation with the Massachusetts' Historic Preservation Officer, pursuant to Section 106 of the National Historic Preservation Act and 36 Code of Federal Regulations Part 800 for the Olin Chemical Superfund Site in Wilmington, Middlesex County, Massachusetts (Site).

EPA is preparing a decision document for the Site – the Record of Decision (ROD) – which sets forth the selected remedy for cleanup of the Site. The ROD will be based on a combination of remedial alternatives outlined in a proposed cleanup plan (Proposed Plan), which EPA issued for public comment in August 2020. The Proposed Plan, together with the Administrative Record upon which the selection of the remedy is based, may be viewed by visiting EPA's webpage for the Site at www.epa.gov/superfund/olin. The Proposed Plan outlines an *interim action* to begin restoration of groundwater and to prevent unacceptable risks from exposure to Site groundwater while gathering additional information to select a final cleanup plan for groundwater, and a *final action* to address all current and potential future risks caused by contaminated soil, soil vapor, sediments, and surface water.

The Site is comprised of the Olin property (Property), an approximately 50-acre parcel located

within an industrialized area at 51 Eames Street in Wilmington (see **Figure 1** for Site locus and general features) and adjoining off-Property areas that have been impacted by contaminant releases from manufacturing and waste disposal activities formerly conducted at the Property (see **Figure 2** for Olin property features and **Figure 3** for the currently known extent of shallow groundwater contamination). A chemical manufacturing facility (Facility) was located within the 30-acre northern portion of the Property, which manufactured specialty chemicals for the rubber and plastics industries beginning in 1953 until the Facility ceased operations in 1986. Waste disposal practices on the Property resulted in groundwater contamination both on and off the Property, and in 2002 and 2003 led to the closure of the Town of Wilmington's drinking water supply wells in the Maple Meadow Brook (MMB) aquifer. The Site includes areas of soil, sediment, and surface water contamination on- and off-Property that have been impacted as a result of the former manufacturing activities.

The Property is bounded to the north by Eames Street; to the south by the Woburn Sanitary Landfill (WSL) in the City of Woburn, a former municipal solid waste landfill that has been closed; to the east by an active rail line operated by the Massachusetts Bay Transportation Authority (MBTA) and a stream called "East Ditch Stream;" and to the west by an inactive Boston and Maine rail line ("PanAM Railways") and a stream called "Off-Property West Ditch Stream." The Site includes the following wetland areas: the "Central Wetlands," "Ephemeral Drainage" wetland complex, and "West Ditch Stream Wetlands" located on the Property; wetland and wooded areas located immediately to the east, south, and west of the Property; and a wetland complex called the "MMB wetlands," located approximately a quarter of a mile to the west of the Property. Industrial/commercial properties are located to the north and further east and west of the Property, including a landfill located to the northwest of the Property known as the "Spinazola Landfill." Residential properties are located to the west and southwest of the Property along Border Avenue, Butters Row, Chestnut Street, Cook Avenue, Hillside Way, and Mill Road.

Currently, the Property is not in active industrial use. A small office trailer is maintained on the Property, from which Olin Corporation (Olin) staff operate and maintain a groundwater remediation system ("Plant B," see discussion below). Most of the former plant buildings have been demolished, as evidenced by concrete slab foundations that remain in the center of the former Facility. The remaining structures are vacant; these include three former office/laboratory buildings located on the northern portion of the Property along Eames Street, two large warehouses that house portions of the pilot Dense Aqueous Phase Liquid (DAPL) extraction system (see discussion of DAPL, below) near the Containment Area on the south side of the Facility, and small buildings associated with the Plant B groundwater treatment system on the east side of the Facility, along the railroad right-of-way.

During the operation of the Facility, process waters and liquid wastes with high concentrations of dissolved inorganic chemicals were discharged to unlined excavations in the native soil (e.g., "acid pits," see **Figure 2**; later, lined lagoons were used). The wastes percolated into the soil or overflowed into on-Property drainage features. As the liquid materials moved downward through the soil, they reached the groundwater table – because the liquids were denser than water, they continued to sink downward as DAPL through the groundwater column, pooling in a series of cascading bedrock depressions known as "DAPL pools." Ultimately, contaminated groundwater

was influenced by the Town of Wilmington's five municipal wells, located in the MMB aquifer to the west of the Property. DAPL has seeped into the underlying bedrock fractures but the extent of DAPL currently present within open bedrock fractures remains unknown. After Olin initiated closure of the Property in 1986, the chemical manufacturing buildings were demolished and removed.

Since 1987, Olin has conducted environmental investigations and remedial actions under the oversight of the Massachusetts Department of Environmental Protection (MassDEP) to understand the nature of environmental impacts at the Site and to address the risks posed by the Site. These investigations and subsequent remedial actions have resulted in the excavation and off-site disposal of soil from the former Lake Poly, two Drum Disposal Areas, a Buried Debris Area, the three Acid Pits (formerly unlined pits on the on the northern half of the Property that received liquid wastes), sediment from the On-Property West Ditch Stream and associated wetlands, South Ditch Stream, and Central Pond.

Olin has operated a groundwater recovery/treatment system ("Plant B") since 1981 to address a petroleum spill and prevent the subsequent seepage of Light Non-Aqueous Phase Liquid (LNAPL) into East Ditch Stream, located at the eastern perimeter of the Property. In 2000-2001, Olin constructed a slurry wall and cap around the on-Property portion of the most upgradient DAPL pool. This area is referred to as the "Containment Area" or "Containment Area DAPL Pool." The intent of this action (which was not ultimately successful) was to eliminate, to the extent feasible, on-Property DAPL as a source of dissolved constituents to groundwater and prevent the migration of DAPL off the Property. The Containment Area is comprised of a 3-foot thick perimeter slurry wall installed to the top of weathered bedrock (approximately 100 to 40 feet [ft] below ground surface [bgs]) and a temporary cap to minimize infiltration of precipitation.

In September 2005, EPA identified the Site as a Proposed Site for the National Priorities List (NPL). The primary hazardous substance used by EPA to score the Site was n-nitrosodimethylamine (NDMA) and the primary exposure pathway evaluated by EPA was groundwater. NDMA is a highly toxic chemical – toxic to the liver and a probable human carcinogen. NDMA in DAPL and groundwater may pose unacceptable risks to residents through ingestion, dermal contact, and inhalation by showering via exposure from drinking water wells installed in the contaminant plume. EPA's health-protective risk range for NDMA is **0.47 to 47 nanograms per Liter (ng/L)**, based on EPA's acceptable cancer risk range of 10^{-6} (1 in 1,000,000) to 10^{-4} (1 in 10,000). NDMA is present in the aquifer with the highest concentrations of over **20,000 ng/L**. Olin samples 20 private residential wells on a quarterly basis to confirm that levels of NDMA do not exceed **47 ng/L**. Olin has provided bottled water to two residences with higher levels of NDMA than the other residences since 2010, and is in the process of working with the Town of Wilmington to extend a waterline to these households.

EPA is the lead agency and MassDEP is the support agency for the Site. EPA entered into an Administrative Settlement Agreement and Order on Consent (AOC) with three of the Potentially Responsible Parties (PRPs) for the Site in July 2007 to undertake a Remedial Investigation/Feasibility Study (RI/FS). The RI report for soil, sediments, and surface water was finalized in 2015. A draft RI report for groundwater was issued in 2019, and groundwater RI

activities are ongoing as of the present. The FS report was issued in 2020.

EPA issued the Proposed Plan in August 2020, which called for an interim action to address current and potential future risks caused by groundwater contamination while gathering additional information to select a final remedy for groundwater in the future; and a final action to address all current and potential future risks caused by soil, wetland sediment/soil, surface water, and LNAPL contamination, as well as vapor intrusion. The proposed remedial measures included removal of the DAPL source material from the aquifer, extracting and treating highly contaminated groundwater, removal of contaminated soil and sediments from on- and off-Property wetlands and restoration of the wetland areas, capping and covering contaminated soils across the Property to prevent exposure and potential leaching from soil into groundwater in excess of drinking water standards; removal of LNAPL and contaminated soil vapor from the Property; preventing indoor air exposures via the vapor intrusion pathway; and allowing for restoration of the Property to beneficial uses. Remedial infrastructure for the treatment of groundwater and DAPL will generally consist of tanks or other vessels to equalize influent groundwater, distribute treatment chemicals, remove metals, ammonia, and particulates, dewater solids, and ultimately remove volatile organic compounds (VOCs) and destroy NDMA via ultra-violet (UV) light transmittance. The final location of extraction wells and conveyance piping, and the groundwater treatment system and other remedial equipment will be determined during a remedial design phase, which will follow the issuance of the ROD (see **Figure 4** for a conceptual plan of the remedial infrastructure for the interim action remedy for groundwater).

The conceptual layout in **Figure 4** shows potential extraction well locations both on and off the Property, including extraction wells cited within Maple Meadow Brook aquifer. Shown on the figure is the Middlesex Canal (Middlesex Canal Historic and Archaeological District), located in the off-Property area of the Site, in close proximity to Maple Meadow Brook. The Middlesex Canal runs between the Merrimack River in Lowell, southeast to the Charles River in Boston, through Lowell, Chelmsford, Billerica, Wilmington, Woburn, Winchester, Medford, Somerville, and Boston (Charlestown). EPA does not anticipate any impacts to the Middlesex Canal from the construction or operation of the groundwater remedy.

EPA is not aware of any indigenous or historical use of the Property. Numerous investigations (which included soil borings and the installation of monitoring wells) have been conducted throughout the Property since the 1980s, which have not revealed any artifacts or potential artifacts. For example, the 2015 RI report documents the advancement of test borings and the collection of soil samples throughout the Property, conducted to better define the horizontal and vertical boundaries of areas of contamination. Additionally, the draft 2019 RI report documents the completion of soil borings down to bedrock and installation of monitoring wells throughout the Site, including the Property.

In total, borings were completed at depths ranging from 1 to 38 ft bgs and more than 750 locations were sampled. All pertinent observations were recorded and logs were completed for soil borings. The RI reports may be viewed by visiting EPA's webpage for the Site at www.epa.gov/superfund/olin. Soil sample locations on the Property are shown on Figure 2.2-1 of the 2015 RI Report (attached as **Figure 5**, Remedial Investigation Soil Sample Locations). Soil boring locations for the groundwater RI are shown on multiple figures in the draft 2019 RI

Report. See, for example, Figure 2.1-1 (attached as **Figure 6**, Shallow Overburden Monitoring Well Locations). Additionally, boring logs from the monitoring well installations between 1977 and 2018 may be found in Appendix A of the draft 2019 RI Report (*Boring Logs and Well Diagram Binder 1977-2018*).

EPA requests that your office contact us if you are aware of any historic or potentially historic properties or cultural resources that could be on the Olin property at 51 Eames Street in Wilmington or in off-Property areas where remedial infrastructure may be located, as shown on the conceptual layout in **Figure 4**. It is our understanding from review of the National Register of Historic Places that no resources that are currently listed fall within the bounds of the Property and off-Property areas where remedial infrastructure may be located. The Town of Wilmington has designated an area within the Town – Wilmington Centre Village – from Middlesex Drive and Church Street, from Adams Street to Wildwood Cemetery, as a historic district. Other places and landmarks within the Town are also listed on the National Register, but such places and structures are not within the bounds of the Property, nor within off-Property areas where remedial equipment may be located for the purposes of remediating the aquifer. As discussed above, the Middlesex Canal, a subject resource, is located within the off-Property area of the Site, but no remedial infrastructure is planned for the canal or its environs.

If EPA receives a response from you by Friday, February 26, 2021, indicating historic or potentially historic properties or cultural resources within the Olin Property or in off-Property areas where remedial infrastructure may be located, EPA will identify such properties or resources in the ROD for the Site.

As the remedial design and remedial action are performed following EPA's issuance of the ROD, we will coordinate with your office further if subject or potentially subject resources are identified within the Olin Property or at any off-Property areas of the Site where remedial equipment may be sited. If protected resources are identified, we will consult with your office to address measures to avoid, minimize, and/or mitigate any impacts to protected resources.

Please note EPA is evaluating and preparing a response to the public comments received during the formal comment period, which began on Wednesday, August 26, 2020 and ended on Monday, October 26, 2020. EPA's proposed remedy may change based upon the public comments. EPA anticipates issuing the ROD during the first quarter of 2021.

As discussed above, enclosed are six figures to help your office visualize the location of the Property and the broader Site. The first figure is a location map showing the boundaries of the Property within the Town of Wilmington, just to the north of boundary with the City of Woburn. The second figure shows key features on the Property, including former manufacturing and disposal areas, streams, and wetlands. The third figure shows the contaminant plume in shallow overburden groundwater. This contour map is based on historical concentrations of the primary Site contaminant, NDMA, which drives the human health risks posed by the Site. The fourth figure presents a conceptual plan of the interim remedy for DAPL and groundwater, showing potential locations for extraction wells on and off the Property and a potential site for the groundwater treatment system. The fifth and sixth figures show soil sampling locations on the Property and monitoring well locations throughout the Site, respectively.

Please contact me at 617-918-1292 or by e-mail to morash.melanie@epa.gov if you have any questions or if additional information about the Site is needed for you to respond fully to our inquiry. Thank you in advance for your timely attention to this matter.

Sincerely,

Melanie Morash

MELANIE MORASH

Digitally signed by MELANIE MORASH
Date: 2021.01.19 17:58:34 -05'00'

Melanie Morash
Remedial Project Manager
Massachusetts Superfund Section

Enclosures: Site Location Maps

cc: Lynne Jennings, Chief, Massachusetts Superfund Section, EPA
Kevin Pechulis, Enforcement Counsel, EPA
Josh Fontaine, Remedial Project Manager, EPA
Garry Waldeck, Project Manager, MassDEP
Jeffrey Hull, Manager, Town of Wilmington